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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/084,163	02/28/2002	Louis R. Testardi		4842

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Arlington, VA 22202

EXAMINER

SHEARIN, ANDREW J

ART UNIT	PAPER NUMBER
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3737

DATE MAILED: 01/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/084,163

Applicant(s)

TESTARDI, LOUIS R.

Examiner

Andrew Shearin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/28/02</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1, 3, 6, 7, 11, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 3, 6, 7, 11, and 12, the word "substantially" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6-9, 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leone et al. (5811814) in view of Keilman et al. (6231516). Leone et al. '814 teaches providing a scintillating fiber having an insertion end and a coupling end; coupling the coupling end of the scintillating fiber to a light intensity measuring device, the light intensity measuring device being located substantially outside of the radiation field and producing a voltage output in accordance with a measured light intensity from the scintillating fiber; providing a guide channel having an insertion end and an external end; inserting the insertion end of the guide channel into a human body

to a region where radiation is to be measured, so as to provide a substantially fixed path into the human body; inserting the insertion end of the scintillating fiber into the external end of the guide channel and into the human body along the substantially fixed path; subjecting the region of the body at the insertion end of the scintillating fiber to radiation (Leone et al. '814 col. 3, lines 46-67). Keilman et al. '516 teaches: detecting the position I of the insertion end of the scintillating fiber along the substantially fixed path within the human body and measuring the light intensity at the light intensity measuring device, with the measured light intensity representing both scintillation light from the scintillating fiber and also Cerenkov light (Keilman et al. '516 col. 30, lines 44-47); incrementally displacing the insertion end of the scintillating fiber by a small distance ΔI to a new detected position $I + \Delta I$ along the substantially fixed path and measuring the intensity with the intensity measuring device (Keilman et al. '516 col. 30, lines 44-51); determining a radiation dose rate, substantially free from the effects of Cerenkov light, for an incremental segment from I to $I + \Delta I$ along the substantially fixed path according to the expression: $\text{Dose Rate} = C \cdot \Delta V / \Delta I$, where C is a coefficient, ΔV is the change in voltage output of the intensity measuring device which results from the insertion end of the fiber being moved between the positions I and $I + \Delta I$, and ΔI is the amount of incremental displacement (Keilman et al. '516 col. 42-51). Keilman et al. '516 also teaches using the output of the filaments to measure change in displacement and electrical voltage resulting in a voltage change to determine a dose rate which is obviously the same as using $C=1$ in the equation listed in the claims (Keilman et al. '516 col. 30, lines 42-51) and it's obvious

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to one skilled in the art at the time the invention was made that changing environments, temperatures, and conditions require constant readjustment of raw data to reflect imperfections in measuring devices; a constant calibration process. It is was also obvious to one skilled in the art at the time the invention was made that in order to calibrate the result of a first order equation a coefficient is used and the best method of deriving a variable in a first order equation is knowing the rest of the variables present in the equation. It would have been obvious to one skilled in the art at the time the invention was made to combine Leone et al. '814 with Keilman et al. '516 in order to create a position sensitive dosimeter in a catheter that facilitates accurate and efficient measurement of radiation levels permitting precise determination of the damaged or diseased area (Leone et al. '814 col. 2, lines 47-50).

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leone et al. '814 in view of Keilman et al. '516 in further view of Tomohide et al. (JP 02206786). Neither Leone et al. '814 nor Keilman et al. '516 teach the claim. Tomohide et al. (JP 02206786) does teach wherein the guide channel is a hypodermic needle which is inserted into the human body in the Constitution. It would have been obvious to one skilled in the art at the time the invention was made to combine Leone et al. '814 in view of Keilman et al. '516 with Tomohide et al. (JP 02206786) in order to create a scintillating fiber that is able to detect radiation in the microregions of the body (Tomohide et al. (JP 02206786) Constitution).

4. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leone et al. '814 in view of Keilman et al. '516 in further view of Tomohide et al. (JP 02206786).

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Neither Leone et al. '814 nor Keilman et al. '516 teach the claim. Tomohide et al. (JP 02206786) does teach wherein the guide channel is a hypodermic needle which is inserted into the human body in the Constitution. It would have been obvious to one skilled in the art at the time the invention was made to combine Leone et al. '814 in view of Keilman et al. '516 with Tomohide et al. (JP 02206786) in order to create a scintillating fiber that is able to detect radiation in the microregions of the body (Tomohide et al. (JP 02206786) Constitution).

5. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leone et al. '814 in view of Keilman et al. '516 in further view of Tomohide et al. (JP 02206786).

Neither Leone et al. '814 nor Keilman et al. '516 teach the claim. Tomohide et al. (JP 02206786) does teach wherein the guide channel is a hypodermic needle which is inserted into the human body in the Constitution. It would have been obvious to one skilled in the art at the time the invention was made to combine Leone et al. '814 in view of Keilman et al. '516 with Tomohide et al. (JP 02206786) in order to create a scintillating fiber that is able to detect radiation in the microregions of the body (Tomohide et al. (JP 02206786) Constitution).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Shearin whose telephone number is (571)272-4744. The examiner can normally be reached on 7:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571)272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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ELENI MANTIS-MERCADER
PRIMARY EXAMINER